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## STM32MPU distribution for Android licenses



A quality version of this page, approved on 2 September 2021, was based off this revision.

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SLA0048 Rev4/March 2018

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## 1.2 gcnano userland multi binary

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## License

### 2 Partitions

#### 2.1 FSBL partition

Name	Version	License
tf-a-stm32mp1	2.2	BSD-3-Clause

#### 2.2 SSBL partition

Name	Version	License
u-boot-stm32mp1	2020.01	GPLv2+

#### 2.3 TEE partitions

##### 2.3.1 Header partition

Name	Version	License
optee_os-stm32mp1	3.9.0	BSD-2-Clause & BSD-3-Clause

##### 2.3.2 Pager partition

Name	Version	License
optee_os-stm32mp	3.9.0	BSD-2-Clause & BSD-3-Clause

##### 2.3.3 Pageable partition

Name	Version	License
optee_os-stm32mp	3.9.0	BSD-2-Clause & BSD-3-Clause

#### 2.4 Splash partition

Name	Version	License
stmicroelectronics.bmp	NA	No license to ST trademarks



## License

### 2.5 Boot partition

Name	Version	License
linux-stm32mp1	5.4	GPLv2

### 2.6 DTB partition

Name	Version	License
linux-stm32mp1	5.4	GPLv2

### 2.7 Super partition

#### 2.7.1 Vendor logical partition

All modules follows the official AOSP licence rule<sup>[1]</sup>

Module Name	License	Description
/lib/modules/*.ko	GPL-2.0	All kernels modules
/firmware/copro/*	Apache-2.0 & MIT & BSD-3-Clause	STM32MP1 Firmware examples for CM4
/firmware/Cube-M4-examples/*	Apache-2.0 & MIT & BSD-3-Clause	STM32MP1 Firmware examples for CM4
htc_9271.fw	Proprietary (firmware-atheros)	WiFi firmware
rtl8723aufw_A.bin	Proprietary (firmware-cypress & firmware-broadcom)	Wi-Fi with BT firmware (rev A)
rtl8723aufw_B.bin	Proprietary (firmware-cypress & firmware-broadcom)	Wi-Fi with BT firmware (rev B)
rtl8723aufw_B_NoBT.bin	Proprietary (firmware-cypress & firmware-broadcom)	Wi-Fi only firmware (rev B)
lib/optee_armtz/*	BSD-2-Clause	Trusted application
applypatch	Apache-2.0	Script to apply patch
awk	BSD-3-Clause	Linux parsing tool
boringsssl_self_test32	Apache-2.0	boringsssl test
dumpsys	Apache-2.0	Binary
fw_cortex_m4_eval.sh	Apache-2.0	Script to manage embedded firmware examples



License		
Module Name	License	Description
grep	BSD-2-Clause	Linux parsing tool
initdriver	Apache-2.0	Initialise driver
logwrapper	Apache-2.0	Wrap logs to logcat
sh	MirOS	Shell
tee-supplciant	BSD-2-Clause	OP-TEE supplciant
toolbox	Apache-2.0	Various Linux tools
toybox_vendor	0BSD	Various Linux tools
vndservice	Apache-2.0	service dedicated for vendor application
xtest	GPL-2.0	OP-TEE test binary
android.hardware.audio.service	Apache-2.0	Audio HAL service binary
android.hardware.boot@1.1-service	Apache-2.0	Boot HAL service binary
android.hardware.camera.provider@2.4-service.stm32mp1	Apache-2.0	Camera provider HAL service binary
android.hardware.cas@1.2-service	Apache-2.0	Cas HAL service binary
android.hardware.copro@1.0-service.stm32mp1	Apache-2.0	Copro HAL service binary
android.hardware.dumpstate@1.1-service.eval	Apache-2.0	Dumpstate HAL service binary
android.hardware.graphics.allocator@2.0-service	Apache-2.0	Graphics alloctor HAL service binary
android.hardware.graphics.composer@2.1-service	Apache-2.0	Graphics composer HAL service binary
android.hardware.health@2.1-service	Apache-2.0	Health HAL service binary
android.hardware.keymaster@3.0-service.optee	Apache-2.0	Keymaster HAL service binary
android.hardware.lights-service.stm32mp1	Apache-2.0	Light HAL service binary
android.hardware.media.omx@1.0-service	Apache-2.0	Media OMX HAL service binary
android.hardware.memtrack@1.0-service	Apache-2.0	Memtrack HAL service binary



License		
Module Name	License	Description
android.hardware.oemlock@1.0-service.stm32mp1	Apache-2.0	OEMLOCK HAL service binary
android.hardware.power-service.example	Apache-2.0	Power HAL service binary
android.hardware.thermal@2.0-service.stm32mp1	Apache-2.0	Thermal HAL service binary
android.hardware.usb@1.1-service.stm32mp1	Apache-2.0	USB HAL service binary
android.hardware.wifi@1.0-service	Apache-2.0	Wi-Fi HAL service binary
hostapd	BSD-3-Clause	Hostapd dameon
wait_for_keymaster_optee	Apache-2.0	Binary
wpa_supplicant	BSD-3-Clause	Manage Wifi connection
android.hardware.audio.common-util.so	Apache-2.0	Audio library
android.hardware.audio.common@6.0-util.so	Apache-2.0	Audio library
libGAL.so	Proprietary (gcnano-userland)	Graphics library
libGLSLC.so	Proprietary (gcnano-userland)	Graphics library
libVSC.so	Proprietary (gcnano-userland)	Graphics library
libalsautils.so	Apache-2.0	Audio library
libaudiohalcm.so	Apache-2.0	Audio library
libavservices_minijail.so	Apache-2.0	System library
libdrm.so	MIT	Graphics library
libdrm_vivante.so	Proprietary (gcnano-userland)	Graphics library
libeffects.so	Apache-2.0	Audio library
libeffectsconfig.so	Apache-2.0	System library
libhidltransport.so	Apache-2.0	System library
libhwbinder.so	Apache-2.0	Audio library
libhwc2on1adapter.so	Apache-2.0	Graphics library
libhwc2onfbadapter.so	Apache-2.0	Graphics library
libkeymaster3device.so	Apache-2.0	Security library
libkeymaster4_1support.so	Apache-2.0	Security library



License		
Module Name	License	Description
libkeymaster4support.so	Apache-2.0	Security library
libkeymaster_messages.so	Apache-2.0	Security library
libkeymaster_portable.so	Apache-2.0	Security library
libkeystore-engine-wifi-hidl.so	Apache-2.0	Security library
libkeystore-wifi-hidl.so	Apache-2.0	Security library
libnbaio_mono.so	Apache-2.0	Audio library
libopus.so	BSD-3-Clause	Codec library
libprotobuf-cpp-full-3.9.1.so	BSD-3-Clause	System library
libprotobuf-cpp-lite-3.9.1.so	BSD-3-Clause	System library
libpuresoftkeymasterdevice.so	Apache-2.0	Security library
libreference-ril.so	Apache-2.0	Telecom library
libril.so	Apache-2.0	Telecom library
librilutils.so	Apache-2.0	Telecom library
libsoft_attestation_cert.so	Apache-2.0	Security library
libstagefright_amrnb_common.so	Apache-2.0	Codec library
libstagefright_enc_common.so	Apache-2.0	Codec library
libstagefright_flacdec.so	Apache-2.0	Codec library
libstagefright_soft_aacdec.so	Apache-2.0	Codec library
libstagefright_soft_aacenc.so	Apache-2.0	Codec library
libstagefright_soft_amrdec.so	Apache-2.0	Codec library
libstagefright_soft_amrnbenc.so	Apache-2.0	Codec library
libstagefright_soft_amrwbenc.so	Apache-2.0	Codec library
libstagefright_soft_avcdec.so	Apache-2.0	Codec library
libstagefright_soft_avcenc.so	Apache-2.0	Codec library
libstagefright_soft_flacdec.so	Apache-2.0	Codec library
libstagefright_soft_flacenc.so	Apache-2.0	Codec library
libstagefright_soft_g711dec.so	Apache-2.0	Codec library
libstagefright_soft_gsmdec.so	Apache-2.0	Codec library
libstagefright_soft_hevcdec.so	Apache-2.0	Codec library
libstagefright_soft_mp3dec.so	Apache-2.0	Codec library
libstagefright_soft_mpeg2dec.so	Apache-2.0	Codec library



License		
Module Name	License	Description
libstagefright_soft_mpeg4dec.so	Apache-2.0	Codec library
libstagefright_soft_mpeg4enc.so	Apache-2.0	Codec library
libstagefright_soft_opusdec.so	Apache-2.0	Codec library
libstagefright_soft_rawdec.so	Apache-2.0	Codec library
libstagefright_soft_vorbisdec.so	Apache-2.0	Codec library
libstagefright_soft_vpxdec.so	Apache-2.0	Codec library
libstagefright_soft_vpxenc.so	Apache-2.0	Codec library
libstagefright_softomx.so	Apache-2.0	Codec library
libstagefright_softomx_plugin.so	Apache-2.0	Codec library
libteec.so	BSD-2-Clause	Security library
libtinycompress.so	BSD-3-Clause	Audio library
libvorbisidec.so	BSD-3-Clause	Codec library
libvpx.so	BSD-3-Clause	Codec library
libwebrtc_audio_preprocessing.so	BSD-3-Clause	Audio library
libwifi-hal.so	Apache-2.0	Network library
libwpa_client.so	BSD-3-Clause	Network library
libEGL_VIVANTE.so	Proprietary (gcnano-userland)	Graphics library
libGLSv1_CM_VIVANTE.so	Proprietary (gcnano-userland)	Graphics library
libGLSv2_VIVANTE.so	Proprietary (gcnano-userland)	Graphics library
android.hardware.audio.effect@6.0-impl.so	Apache-2.0	HAL library
android.hardware.audio@6.0-impl.so	Apache-2.0	HAL library
android.hardware.boot@1.0-impl-1.1.so	Apache-2.0	HAL library
android.hardware.graphics.allocator@2.0-impl.so	Apache-2.0	HAL library
android.hardware.graphics.composer@2.1-impl.so	Apache-2.0	HAL library
android.hardware.graphics.mapper@2.0-impl-2.1.so	Apache-2.0	HAL library
android.hardware.health@2.0-impl-		





License		
Module Name	License	Description
2.1-stm32mp1.sd.so	Apache-2.0	HAL library
android.hardware.memtrack@1.0-impl.so	Apache-2.0	HAL library
audio.primary.default.so	Apache-2.0	HAL library
audio.primary.stm.so	Apache-2.0	HAL library
audio.r_submix.default.so	Apache-2.0	HAL library
audio.usb.default.so	Apache-2.0	HAL library
gralloc.default.so	Apache-2.0	HAL library
gralloc.stm.so	Proprietary (gcnano-userland)	HAL library
hwcomposer.drm_stm32mp1.so	Apache-2.0	HAL library
local_time.default.so	Apache-2.0	HAL library
memtrack.stm.so	Apache-2.0	HAL library
power.default.so	Apache-2.0	HAL library
vibrator.default.so	Apache-2.0	HAL library
libclearkeycasplugin.so	Apache-2.0	Security library
libdrmclearkeyplugin.so	Apache-2.0	Security library
libaudiopreprocessing.so	Apache-2.0	Audio library
libbundlewrapper.so	Apache-2.0	Audio library
libdownmix.so	Apache-2.0	Audio library
libdynproc.so	Apache-2.0	Audio library
libeffectproxy.so	Apache-2.0	Audio library
libldnhncr.so	Apache-2.0	Audio library
libreverbwrapper.so	Apache-2.0	Audio library
libvisualizer.so	Apache-2.0	Audio library

### 2.7.2 System logical partition

All modules follows the official AOSP licence rule<sup>[2]</sup>

Module Name	License	Description
BasicDreams	Apache-2.0	Application
Bluetooth	Apache-2.0	Application
BluetoothMidiService	Apache-2.0	Application



License		
Module Name	License	Description
BookmarkProvider	Apache-2.0	Application
CertInstaller	Apache-2.0	Application
CompanionDeviceManager	Apache-2.0	Application
EasterEgg	Apache-2.0	Application
ExtShared	Apache-2.0	Application
HTMLViewer	Apache-2.0	Application
KeyChain	Apache-2.0	Application
PacProcessor	Apache-2.0	Application
PlatformCaptivePortalLogin	Apache-2.0	Application
PrintRecommendationService	Apache-2.0	Application
PrintSpooler	Apache-2.0	Application
SecureElement	Apache-2.0	Application
SimAppDialog	Apache-2.0	Application
Traceur	Apache-2.0	Application
WallpaperBackup	Apache-2.0	Application
BackupRestoreConfirmation	Apache-2.0	Private Application
BlockedNumberProvider	Apache-2.0	Private Provider
BuiltInPrintService	Apache-2.0	Private Provider
CalendarProvider	Apache-2.0	Private Provider
CellBroadcastServiceModulePlatform	Apache-2.0	Private Provider
ContactsProvider	Apache-2.0	Private Provider
CoproService	Apache-2.0	Private Service
DocumentsUI	Apache-2.0	Private Application
DownloadProvider	Apache-2.0	Private Provider
DownloadProviderUi	Apache-2.0	Private Application
DynamicSystemInstallationService	Apache-2.0	Private Service
ExternalStorageProvider	Apache-2.0	Private Provider
FusedLocation	Apache-2.0	Private Application
InProcessNetworkStack	Apache-2.0	Private Application
InputDevices	Apache-2.0	Private Application
LocalTransport	Apache-2.0	Private Application



License		
Module Name	License	Description
ManagedProvisioning	Apache-2.0	Private Application
MediaProviderLegacy	Apache-2.0	Private Provider
MtpService	Apache-2.0	Private Service
PackageInstaller	Apache-2.0	Private Application
PlatformNetworkPermissionConfig	Apache-2.0	Private Application
ProxyHandler	Apache-2.0	Private Application
SettingsProvider	Apache-2.0	Private Provider
SharedStorageBackup	Apache-2.0	Private Application
Shell	Apache-2.0	Private Application
SoundPicker	Apache-2.0	Private Application
StatementService	Apache-2.0	Private Service
Telecom	Apache-2.0	Private Service
TelephonyProvider	Apache-2.0	Private Service
TeleService	Apache-2.0	Private Service
UserDictionaryProvider	Apache-2.0	Private Provider
VpnDialogs	Apache-2.0	Private Application
com.android.adbd.apex	Apache-2.0	APEX framework package
com.android.apex.cts.shim.apex	Apache-2.0	APEX framework package
com.android.art.release.apex	Apache-2.0	APEX framework package
com.android.conscrypt.apex	Apache-2.0	APEX framework package
com.android.extservices.apex	Apache-2.0	APEX framework package
com.android.i18n.apex	Apache-2.0	APEX framework package
com.android.ipsec.apex	Apache-2.0	APEX framework package
com.android.media.apex	Apache-2.0	APEX framework package
		APEX framework



License		
Module Name	License	Description
com.android.media.provider.apex	Apache-2.0	package
com.android.media.swcodec.apex	Apache-2.0	APEX framework package
com.android.neuralnetworks.apex	Apache-2.0	APEX framework package
com.android.os.statsd.apex	Apache-2.0	APEX framework package
com.android.permission.apex	Apache-2.0	APEX framework package
com.android.resolv.apex	Apache-2.0	APEX framework package
com.android.runtime.apex	Apache-2.0	APEX framework package
com.android.sdkext.apex	Apache-2.0	APEX framework package
com.android.tethering.inprocess.apex	Apache-2.0	APEX framework package
com.android.tzdata.apex	Apache-2.0	APEX framework package
com.android.vndk.current.apex	Apache-2.0	APEX framework package
com.android.wifi.apex	Apache-2.0	APEX framework package
abb	Apache-2.0	Binary
adbd	Apache-2.0	Binary
am	Apache-2.0	Binary
apexd	Apache-2.0	Binary
appops	Apache-2.0	Binary
app_process32	Apache-2.0	Binary
appwidget	Apache-2.0	Binary
atrace	Apache-2.0	Binary
audioserver	Apache-2.0	Binary
auditctl	Apache-2.0	Binary



License		
Module Name	License	Description
awk	BSD-3-Clause	Binary
bcc	Apache-2.0	Binary
blank_screen	Apache-2.0	Binary
blkid	GPL-2.0	Binary
bmgr	Apache-2.0	Binary
bootanimation	Apache-2.0	Binary
bootstat	Apache-2.0	Binary
boringsssl_self_test32	Apache-2.0	Binary
bpfloader	Apache-2.0	Binary
bu	Apache-2.0	Binary
bugreport	Apache-2.0	Binary
bugreportz	Apache-2.0	Binary
bzip2	BSD-3-Clause	Binary
cameraserver	Apache-2.0	Binary
charger	Apache-2.0	Binary
clatd	Apache-2.0	Binary
cmd	Apache-2.0	Binary
content	Apache-2.0	Binary
crash_dump32	Apache-2.0	Binary
credstore	Apache-2.0	Binary
dalvikvm	Apache-2.0	Binary
debuggerd	Apache-2.0	Binary
device_config	Apache-2.0	Binary
dex2oat	Apache-2.0	Binary
dmctl	Apache-2.0	Binary
dnsmasq	GPL-2.0	Binary
dpm	Apache-2.0	Binary
drmserver	Apache-2.0	Binary
dumpstate	Apache-2.0	Binary
dumpsys	Apache-2.0	Binary
e2freefrag	GPL-2.0	Binary



License		
Module Name	License	Description
e2fsck	GPL-2.0	Binary
e2fsdroid	GPL-2.0	Binary
flags_health_check	Apache-2.0	Binary
fsck.f2fs	GPL-2.0	Binary
fsck_msdos	BSD-3-Clause	Binary
fsverity_init	Apache-2.0	Binary
gatekeeperd	Apache-2.0	Binary
gpuservice	Apache-2.0	Binary
grep	BSD-2	Binary
gsi_tool	Apache-2.0	Binary
gsid	Apache-2.0	Binary
heapprofd	Apache-2.0	Binary
hid	Apache-2.0	Binary
hw servicemanager	Apache-2.0	Binary
idmap2	Apache-2.0	Binary
idmap2d	Apache-2.0	Binary
ime	Apache-2.0	Binary
incident	Apache-2.0	Binary
incident_helper	Apache-2.0	Binary
incident-helper-cmd	Apache-2.0	Binary
incidentd	Apache-2.0	Binary
init	Apache-2.0	Binary
input	Apache-2.0	Binary
installd	Apache-2.0	Binary
iorap.cmd.compiler	Apache-2.0	Binary
iorap.cmd.maintenance	Apache-2.0	Binary
iorapd	Apache-2.0	Binary
iorap.inode2filename	Apache-2.0	Binary
iorap.prefetcherd	Apache-2.0	Binary
ip	GPL-2.0	Binary
ip6tables	GPL-2.0	Binary



License		
Module Name	License	Description
iptables	GPL-2.0	Binary
keystore	Apache-2.0	Binary
keystore_cli_v2	Apache-2.0	Binary
ldd	Apache-2.0	Binary
ld.mc	BSD-3-Clause	Binary
librank	Apache-2.0	Binary
linker	BSD-3-Clause	Binary
linkerconfig	Apache-2.0	Binary
lmd	Apache-2.0	Binary
locksettings	Apache-2.0	Binary
logcat	Apache-2.0	Binary
logd	Apache-2.0	Binary
logwrapper	Apache-2.0	Binary
lpdump	Apache-2.0	Binary
lpdumpd	Apache-2.0	Binary
lshal	Apache-2.0	Binary
make_f2fs	Apache-2.0	Binary
mdnsd	Apache-2.0	Binary
mediaextractor	Apache-2.0	Binary
mediametrics	Apache-2.0	Binary
mediaserver	Apache-2.0	Binary
migrate_legacy_obb_data.sh	Apache-2.0	Binary
mini-keyctl	Apache-2.0	Binary
mke2fs	GPL-2.0	Binary
monkey	Apache-2.0	Binary
mtpd	Apache-2.0	Binary
ndc	Apache-2.0	Binary
netd	Apache-2.0	Binary
netutils-wrapper-1.0	Apache-2.0	Binary
newfs_msdos	BSD-2	Binary
notify_traceur.sh	Apache-2.0	Binary



License		
Module Name	License	Description
perfetto	Apache-2.0	Binary
ping	BSD-3-Clause	Binary
ping6	BSD-3-Clause	Binary
pm	Apache-2.0	Binary
pppd	BSD-3-Clause	Binary
procrank	Apache-2.0	Binary
racoon	BSD-3-Clause	Binary
reboot	BSD-3-Clause	Binary
recovery-persist	Apache-2.0	Binary
recovery-refresh	Apache-2.0	Binary
requestsync	Apache-2.0	Binary
resize2fs	GPL-2.0	Binary
rss_hwm_reset	Apache-2.0	Binary
run-as	Apache-2.0	Binary
schedtest	Apache-2.0	Binary
screencap	Apache-2.0	Binary
screenrecord	Apache-2.0	Binary
sdcard	Apache-2.0	Binary
secdiscard	Apache-2.0	Binary
secilc	BSD-3-Clause	Binary
sensorservice	Apache-2.0	Binary
service	Apache-2.0	Binary
servicemanager	Apache-2.0	Binary
settings	Apache-2.0	Binary
set-verity-state	Apache-2.0	Binary
sgdisk	GPL-2.0	Binary
sh	BSD-3-Clause	Binary
showmap	Apache-2.0	Binary
simpleperf	Apache-2.0	Binary
simpleperf_app_runner	Apache-2.0	Binary
sload_f2fs	Apache-2.0	Binary





License		
Module Name	License	Description
sm	Apache-2.0	Binary
snapshotctl	Apache-2.0	Binary
ss	GPL-2.0	Binary
stored	Apache-2.0	Binary
surfaceflinger	Apache-2.0	Binary
svc	Apache-2.0	Binary
tc	GPL-2.0	Binary
tcpdump	BSD-3-Clause	Binary
telecom	Apache-2.0	Binary
tinycap	BSD-3-Clause	Binary
tinymix	BSD-3-Clause	Binary
tinypcminfo	BSD-3-Clause	Binary
tinyplay	BSD-3-Clause	Binary
tombstoned	Apache-2.0	Binary
toolbox	BSD-2-Clause	Binary
toybox	0BSD	Binary
traced	Apache-2.0	Binary
traced_perf	Apache-2.0	Binary
traced_probes	Apache-2.0	Binary
trigger_perfetto	Apache-2.0	Binary
tune2fs	GPL-2.0	Binary
tzdatacheck	Apache-2.0	Binary
uiautomator	Apache-2.0	Binary
uncrypt	Apache-2.0	Binary
unzip	Apache-2.0	Binary
update_engine	Apache-2.0	Binary
update_verifier	Apache-2.0	Binary
usbd	Apache-2.0	Binary
vdc	Apache-2.0	Binary
viewcompiler	Apache-2.0	Binary
vold	Apache-2.0	Binary



License		
Module Name	License	Description
vold_prepare_subdirs	Apache-2.0	Binary
vr	Apache-2.0	Binary
wait_for_keymaster	Apache-2.0	Binary
watchdogd	Apache-2.0	Binary
wificond	Apache-2.0	Binary
wm	Apache-2.0	Binary
ziptool	Apache-2.0	Binary
linker	BSD-3-Clause	Binary
android.hidl.allocator@1.0-service	Apache-2.0	Binary
android.system.suspend@1.0-service	Apache-2.0	Binary
android.frameworks.automotive.display@1.0.so	Apache-2.0	Library
android.frameworks.bufferhub@1.0.so	Apache-2.0	Library
android.frameworks.cameraservice.common@2.0.so	Apache-2.0	Library
android.frameworks.cameraservice.device@2.0.so	Apache-2.0	Library
android.frameworks.cameraservice.service@2.0.so	Apache-2.0	Library
android.frameworks.cameraservice.service@2.1.so	Apache-2.0	Library
android.frameworks.displayservice@1.0.so	Apache-2.0	Library
android.frameworks.schedulerservice@1.0.so	Apache-2.0	Library
android.frameworks.sensorservice@1.0.so	Apache-2.0	Library
android.frameworks.stats@1.0.so	Apache-2.0	Library
android.frameworks.vr.composer@2.0.so	Apache-2.0	Library
android.hardware.atrace@1.0.so	Apache-2.0	Library
android.hardware.audio@2.0.so	Apache-2.0	Library
android.hardware.audio@4.0.so	Apache-2.0	Library
android.hardware.audio@5.0.so	Apache-2.0	Library
android.hardware.audio@6.0.so	Apache-2.0	Library
android.hardware.audio.common@2.0.so	Apache-2.0	Library
android.hardware.audio.common@2.0-util.so	Apache-2.0	Library
android.hardware.audio.common@4.0.so	Apache-2.0	Library
android.hardware.audio.common@4.0-util.so	Apache-2.0	Library
android.hardware.audio.common@5.0.so	Apache-2.0	Library



License		
Module Name	License	Description
android.hardware.audio.common@5.0-util.so	Apache-2.0	Library
android.hardware.audio.common@6.0.so	Apache-2.0	Library
android.hardware.audio.common@6.0-util.so	Apache-2.0	Library
android.hardware.audio.common-util.so	Apache-2.0	Library
android.hardware.audio.effect@2.0.so	Apache-2.0	Library
android.hardware.audio.effect@4.0.so	Apache-2.0	Library
android.hardware.audio.effect@5.0.so	Apache-2.0	Library
android.hardware.audio.effect@6.0.so	Apache-2.0	Library
android.hardware.authsecret@1.0.so	Apache-2.0	Library
android.hardware.automotive.audiocontrol@1.0.so	Apache-2.0	Library
android.hardware.automotive.audiocontrol@2.0.so	Apache-2.0	Library
android.hardware.automotive.can@1.0.so	Apache-2.0	Library
android.hardware.automotive.evs@1.0.so	Apache-2.0	Library
android.hardware.automotive.evs@1.1.so	Apache-2.0	Library
android.hardware.automotive.sv@1.0.so	Apache-2.0	Library
android.hardware.automotive.vehicle@2.0.so	Apache-2.0	Library
android.hardware.biometrics.face@1.0.so	Apache-2.0	Library
android.hardware.biometrics.fingerprint@2.1.so	Apache-2.0	Library
android.hardware.biometrics.fingerprint@2.2.so	Apache-2.0	Library
android.hardware.bluetooth@1.0.so	Apache-2.0	Library
android.hardware.bluetooth@1.1.so	Apache-2.0	Library
android.hardware.bluetooth.a2dp@1.0.so	Apache-2.0	Library
android.hardware.bluetooth.audio@2.0.so	Apache-2.0	Library
android.hardware.boot@1.0.so	Apache-2.0	Library
android.hardware.boot@1.1.so	Apache-2.0	Library
android.hardware.broadcastradio@1.0.so	Apache-2.0	Library
android.hardware.broadcastradio@1.1.so	Apache-2.0	Library
android.hardware.broadcastradio@2.0.so	Apache-2.0	Library
android.hardware.camera.common@1.0.so	Apache-2.0	Library
android.hardware.camera.device@1.0.so	Apache-2.0	Library
android.hardware.camera.device@3.2.so	Apache-2.0	Library



License		
Module Name	License	Description
android.hardware.camera.device@3.3.so	Apache-2.0	Library
android.hardware.camera.device@3.4.so	Apache-2.0	Library
android.hardware.camera.device@3.5.so	Apache-2.0	Library
android.hardware.camera.device@3.6.so	Apache-2.0	Library
android.hardware.camera.metadata@3.2.so	Apache-2.0	Library
android.hardware.camera.metadata@3.3.so	Apache-2.0	Library
android.hardware.camera.metadata@3.4.so	Apache-2.0	Library
android.hardware.camera.metadata@3.5.so	Apache-2.0	Library
android.hardware.camera.provider@2.4.so	Apache-2.0	Library
android.hardware.camera.provider@2.5.so	Apache-2.0	Library
android.hardware.camera.provider@2.6.so	Apache-2.0	Library
android.hardware.cas@1.0.so	Apache-2.0	Library
android.hardware.cas@1.1.so	Apache-2.0	Library
android.hardware.cas@1.2.so	Apache-2.0	Library
android.hardware.cas.native@1.0.so	Apache-2.0	Library
android.hardware.common-V1-ndk_platform.so	Apache-2.0	Library
android.hardware.configstore@1.0.so	Apache-2.0	Library
android.hardware.configstore@1.1.so	Apache-2.0	Library
android.hardware.configstore-utils.so	Apache-2.0	Library
android.hardware.confirmationui@1.0.so	Apache-2.0	Library
android.hardware.confirmationui-support-lib.so	Apache-2.0	Library
android.hardware.contexthub@1.0.so	Apache-2.0	Library
android.hardware.contexthub@1.1.so	Apache-2.0	Library
android.hardware.copro@1.0.so	Apache-2.0	Library
android.hardware.drm@1.0.so	Apache-2.0	Library
android.hardware.drm@1.1.so	Apache-2.0	Library
android.hardware.drm@1.2.so	Apache-2.0	Library
android.hardware.drm@1.3.so	Apache-2.0	Library
android.hardware.dumpstate@1.0.so	Apache-2.0	Library
android.hardware.dumpstate@1.1.so	Apache-2.0	Library
android.hardware.fastboot@1.0.so	Apache-2.0	Library



License		
Module Name	License	Description
android.hardware.gatekeeper@1.0.so	Apache-2.0	Library
android.hardware.gnss@1.0.so	Apache-2.0	Library
android.hardware.gnss@1.1.so	Apache-2.0	Library
android.hardware.gnss@2.0.so	Apache-2.0	Library
android.hardware.gnss@2.1.so	Apache-2.0	Library
android.hardware.gnss. measurement_corrections@1.0.so	Apache-2.0	Library
android.hardware.gnss. measurement_corrections@1.1.so	Apache-2.0	Library
android.hardware.gnss.visibility_control@1.0.so	Apache-2.0	Library
android.hardware.graphics.allocator@2.0.so	Apache-2.0	Library
android.hardware.graphics.allocator@3.0.so	Apache-2.0	Library
android.hardware.graphics.allocator@4.0.so	Apache-2.0	Library
android.hardware.graphics.bufferqueue@1.0.so	Apache-2.0	Library
android.hardware.graphics.bufferqueue@2.0.so	Apache-2.0	Library
android.hardware.graphics.common@1.0.so	Apache-2.0	Library
android.hardware.graphics.common@1.1.so	Apache-2.0	Library
android.hardware.graphics.common@1.2.so	Apache-2.0	Library
android.hardware.graphics.common-V1- ndk_platform.so	Apache-2.0	Library
android.hardware.graphics.composer@2.1.so	Apache-2.0	Library
android.hardware.graphics.composer@2.2.so	Apache-2.0	Library
android.hardware.graphics.composer@2.3.so	Apache-2.0	Library
android.hardware.graphics.composer@2.4.so	Apache-2.0	Library
android.hardware.graphics.mapper@2.0.so	Apache-2.0	Library
android.hardware.graphics.mapper@2.1.so	Apache-2.0	Library
android.hardware.graphics.mapper@3.0.so	Apache-2.0	Library
android.hardware.graphics.mapper@4.0.so	Apache-2.0	Library
android.hardware.health@1.0.so	Apache-2.0	Library
android.hardware.health@2.0.so	Apache-2.0	Library
android.hardware.health@2.1.so	Apache-2.0	Library



License		
Module Name	License	Description
android.hardware.health.storage@1.0.so	Apache-2.0	Library
android.hardware.identity-support-lib.so	Apache-2.0	Library
android.hardware.input.classifier@1.0.so	Apache-2.0	Library
android.hardware.input.common@1.0.so	Apache-2.0	Library
android.hardware.ir@1.0.so	Apache-2.0	Library
android.hardware.keymaster@3.0.so	Apache-2.0	Library
android.hardware.keymaster@4.0.so	Apache-2.0	Library
android.hardware.keymaster@4.1.so	Apache-2.0	Library
android.hardware.keymaster-V2-ndk_platform.so	Apache-2.0	Library
android.hardware.light@2.0.so	Apache-2.0	Library
android.hardware.media@1.0.so	Apache-2.0	Library
android.hardware.media.bufferpool@1.0.so	Apache-2.0	Library
android.hardware.media.bufferpool@2.0.so	Apache-2.0	Library
android.hardware.media.c2@1.0.so	Apache-2.0	Library
android.hardware.media.c2@1.1.so	Apache-2.0	Library
android.hardware.media.omx@1.0.so	Apache-2.0	Library
android.hardware.memtrack@1.0.so	Apache-2.0	Library
android.hardware.neuralnetworks@1.0.so	Apache-2.0	Library
android.hardware.neuralnetworks@1.1.so	Apache-2.0	Library
android.hardware.neuralnetworks@1.2.so	Apache-2.0	Library
android.hardware.neuralnetworks@1.3.so	Apache-2.0	Library
android.hardware.nfc@1.0.so	Apache-2.0	Library
android.hardware.nfc@1.1.so	Apache-2.0	Library
android.hardware.oemlock@1.0.so	Apache-2.0	Library
android.hardware.power@1.0.so	Apache-2.0	Library
android.hardware.power@1.1.so	Apache-2.0	Library
android.hardware.power@1.2.so	Apache-2.0	Library
android.hardware.power@1.3.so	Apache-2.0	Library
android.hardware.power.stats@1.0.so	Apache-2.0	Library
android.hardware.power-V1-cpp.so	Apache-2.0	Library
android.hardware.radio@1.0.so	Apache-2.0	Library



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Module Name	License	Description
android.hardware.radio@1.1.so	Apache-2.0	Library
android.hardware.radio@1.2.so	Apache-2.0	Library
android.hardware.radio@1.3.so	Apache-2.0	Library
android.hardware.radio@1.4.so	Apache-2.0	Library
android.hardware.radio@1.5.so	Apache-2.0	Library
android.hardware.radio.config@1.0.so	Apache-2.0	Library
android.hardware.radio.config@1.1.so	Apache-2.0	Library
android.hardware.radio.config@1.2.so	Apache-2.0	Library
android.hardware.radio.deprecated@1.0.so	Apache-2.0	Library
android.hardware.renderscript@1.0.so	Apache-2.0	Library
android.hardware.secure_element@1.0.so	Apache-2.0	Library
android.hardware.secure_element@1.1.so	Apache-2.0	Library
android.hardware.secure_element@1.2.so	Apache-2.0	Library
android.hardware.sensors@1.0.so	Apache-2.0	Library
android.hardware.sensors@2.0.so	Apache-2.0	Library
android.hardware.sensors@2.1.so	Apache-2.0	Library
android.hardware.soundtrigger@2.0-core.so	Apache-2.0	Library
android.hardware.soundtrigger@2.0.so	Apache-2.0	Library
android.hardware.soundtrigger@2.1.so	Apache-2.0	Library
android.hardware.soundtrigger@2.2.so	Apache-2.0	Library
android.hardware.soundtrigger@2.3.so	Apache-2.0	Library
android.hardware.tetheroffload.config@1.0.so	Apache-2.0	Library
android.hardware.tetheroffload.control@1.0.so	Apache-2.0	Library
android.hardware.thermal@1.0.so	Apache-2.0	Library
android.hardware.thermal@1.1.so	Apache-2.0	Library
android.hardware.thermal@2.0.so	Apache-2.0	Library
android.hardware.tv.cec@1.0.so	Apache-2.0	Library
android.hardware.tv.cec@2.0.so	Apache-2.0	Library
android.hardware.tv.input@1.0.so	Apache-2.0	Library
android.hardware.tv.tuner@1.0.so	Apache-2.0	Library
android.hardware.usb@1.0.so	Apache-2.0	Library



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Module Name	License	Description
android.hardware.usb@1.1.so	Apache-2.0	Library
android.hardware.usb@1.2.so	Apache-2.0	Library
android.hardware.usb.gadget@1.0.so	Apache-2.0	Library
android.hardware.usb.gadget@1.1.so	Apache-2.0	Library
android.hardware.vibrator@1.0.so	Apache-2.0	Library
android.hardware.vibrator@1.1.so	Apache-2.0	Library
android.hardware.vibrator@1.2.so	Apache-2.0	Library
android.hardware.vibrator@1.3.so	Apache-2.0	Library
android.hardware.vibrator-V1-cpp.so	Apache-2.0	Library
android.hardware.vr@1.0.so	Apache-2.0	Library
android.hardware.weaver@1.0.so	Apache-2.0	Library
android.hardware.wifi@1.0.so	Apache-2.0	Library
android.hardware.wifi@1.1.so	Apache-2.0	Library
android.hardware.wifi@1.2.so	Apache-2.0	Library
android.hardware.wifi@1.3.so	Apache-2.0	Library
android.hardware.wifi@1.4.so	Apache-2.0	Library
android.hardware.wifi.hostapd@1.0.so	Apache-2.0	Library
android.hardware.wifi.hostapd@1.1.so	Apache-2.0	Library
android.hardware.wifi.hostapd@1.2.so	Apache-2.0	Library
android.hardware.wifi.offload@1.0.so	Apache-2.0	Library
android.hardware.wifi.suplicant@1.0.so	Apache-2.0	Library
android.hardware.wifi.suplicant@1.1.so	Apache-2.0	Library
android.hardware.wifi.suplicant@1.2.so	Apache-2.0	Library
android.hardware.wifi.suplicant@1.3.so	Apache-2.0	Library
android.hidl allocator@1.0.so	Apache-2.0	Library
android.hidl.memory@1.0.so	Apache-2.0	Library
android.hidl.memory.block@1.0.so	Apache-2.0	Library
android.hidl.memory.token@1.0.so	Apache-2.0	Library
android.hidl.safe_union@1.0.so	Apache-2.0	Library
android.hidl.token@1.0.so	Apache-2.0	Library
android.hidl.token@1.0-utils.so	Apache-2.0	Library





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Module Name	License	Description
android.system.net.netd@1.0.so	Apache-2.0	Library
android.system.net.netd@1.1.so	Apache-2.0	Library
android.system.suspend@1.0.so	Apache-2.0	Library
android.system.wifi.keystore@1.0.so	Apache-2.0	Library
apex_aidl_interface-V1-cpp.so	Apache-2.0	Library
capture_state_listener-aidl-V1-cpp.so	Apache-2.0	Library
dnsresolver_aidl_interface-V6-cpp.so	Apache-2.0	Library
gsi_aidl_interface-V1-cpp.so	Apache-2.0	Library
heapprofd_client.so	Apache-2.0	Library
ld-android.so	BSD-2-Clause	Library
libaaudio.so	Apache-2.0	Library
libaaudio_internal.so	Apache-2.0	Library
libaaudioservice.so	Apache-2.0	Library
libadbd_auth.so	Apache-2.0	Library
libadbd_fs.so	Apache-2.0	Library
libadf.so	Apache-2.0	Library
libamidi.so	Apache-2.0	Library
libandroid.so	Apache-2.0	Library
libandroid_net.so	Apache-2.0	Library
libandroid_runtime.so	Apache-2.0	Library
libandroid_runtime_lazy.so	Apache-2.0	Library
libandroid_servers.so	Apache-2.0	Library
libandroidfw.so	Apache-2.0	Library
libappfuse.so	Apache-2.0	Library
libartpalette-system.so	Apache-2.0	Library
libasyncio.so	Apache-2.0	Library
libaudioclient.so	Apache-2.0	Library
libaudioeffect_jni.so	Apache-2.0	Library
libaudioflinger.so	Apache-2.0	Library
libaudiofoundation.so	Apache-2.0	Library
libaudiohal.so	Apache-2.0	Library



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Module Name	License	Description
libaudiohal@2.0.so	Apache-2.0	Library
libaudiohal@4.0.so	Apache-2.0	Library
libaudiohal@5.0.so	Apache-2.0	Library
libaudiohal@6.0.so	Apache-2.0	Library
libaudiohal_deathhandler.so	Apache-2.0	Library
libaudiomanager.so	Apache-2.0	Library
libaudiopolicy.so	Apache-2.0	Library
libaudiopolicyenginedefault.so	Apache-2.0	Library
libaudiopolicymanager.so	Apache-2.0	Library
libaudiopolicymanagerdefault.so	Apache-2.0	Library
libaudiopolicyservice.so	Apache-2.0	Library
libaudioprocessing.so	Apache-2.0	Library
libaudio-resampler.so	Apache-2.0	Library
libaudioroute.so	Apache-2.0	Library
libaudiospdif.so	Apache-2.0	Library
libaudioutils.so	Apache-2.0	Library
libavservices_minijail.so	Apache-2.0	Library
libbacktrace.so	Apache-2.0	Library
libbase.so	Apache-2.0	Library
libbcc.so	Apache-2.0	Library
libbcinfo.so	Apache-2.0	Library
libbinder.so	Apache-2.0	Library
libbinder_ndk.so	Apache-2.0	Library
libbinderwrapper.so	Apache-2.0	Library
libblas.so	Apache-2.0	Library
libbluetooth.so	Apache-2.0	Library
libbluetooth_jni.so	Apache-2.0	Library
libbootanimation.so	Apache-2.0	Library
libbootloader_message.so	Apache-2.0	Library
libbpf.so	Apache-2.0	Library
libbpf_android.so	Apache-2.0	Library



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Module Name	License	Description
libbrillo.so	Apache-2.0	Library
libbrillo-binder.so	Apache-2.0	Library
libbrillo-stream.so	Apache-2.0	Library
libbufferhub.so	Apache-2.0	Library
libbufferhubqueue.so	Apache-2.0	Library
libbufferqueueconverter.so	Apache-2.0	Library
libc.so	BSD-3-Clause	Library
libc++.so	BSD-3-Clause	Library
libcamera_client.so	Apache-2.0	Library
libcamera_metadata.so	Apache-2.0	Library
libcamera2ndk.so	Apache-2.0	Library
libcameraservice.so	Apache-2.0	Library
libcap.so	BSD-3-Clause	Library
libcgroupc.so	Apache-2.0	Library
libchrome.so	BSD-3-Clause	Library
libclang_rt.asan-arm-android.so	NCSA	Library
libclang_rt.scudo_minimal-arm-android.so	NCSA	Library
libclang_rt.scudo-arm-android.so	NCSA	Library
libclang_rt.ubsan_standalone-arm-android.so	NCSA	Library
libclcore.bc	Apache-2.0	Library
libclcore_debug.bc	Apache-2.0	Library
libclcore_debug_g.bc	Apache-2.0	Library
libclcore_g.bc	Apache-2.0	Library
libclcore_neon.bc	Apache-2.0	Library
libcn-cbor.so	MIT	Library
libcodec2.so	Apache-2.0	Library
libcodec2_client.so	Apache-2.0	Library
libcodec2_hidl_client@1.0.so	Apache-2.0	Library
libcodec2_hidl_client@1.1.so	Apache-2.0	Library
libcodec2_vndk.so	Apache-2.0	Library
libcompiler_rt.so	MIT	Library



License		
Module Name	License	Description
libcredstore_aidl.so	Apache-2.0	Library
libcrypto.so	BSD-3-Clause	Library
libcrypto_utils.so	BSD-3-Clause	Library
libcups.so	GPL-2.0 & LGPL-2.0	Library
libcurl.so	MIT	Library
libcutils.so	Apache-2.0	Library
libdataloader.so	Apache-2.0	Library
libdatasource.so	Apache-2.0	Library
libdebuggerd_client.so	Apache-2.0	Library
libdexfile_support.so	Apache-2.0	Library
libdiskconfig.so	Apache-2.0	Library
libdisplayservicehidl.so	Apache-2.0	Library
libdl.so	BSD-3-Clause	Library
libdl_android.so	Apache-2.0	Library
libdng_sdk.so	BSD-3-Clause	Library
libdrm.so	BSD-3-Clause	Library
libdrmframework.so	Apache-2.0	Library
libdrmframework_jni.so	Apache-2.0	Library
libdumpstateaidl.so	Apache-2.0	Library
libdumpstateutil.so	Apache-2.0	Library
libdumputils.so	Apache-2.0	Library
libdynamic_depth.so	Apache-2.0	Library
libeffectsconfig.so	Apache-2.0	Library
libEGL.so	Apache-2.0	Library
libETC1.so	Apache-2.0	Library
libevent.so	BSD-3-Clause	Library
libexif.so	LGPL-2.1	Library
libexpat.so	BSD-3-Clause	Library
libext2_blkid.so	GPL-2.0	Library
libext2_com_err.so	MIT	Library



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Module Name	License	Description
libext2_e2p.so	GPL-2.0	Library
libext2_misc.so	GPL-2.0	Library
libext2_quota.so	GPL-2.0	Library
libext2_uuid.so	GPL-2.0	Library
libext2fs.so	GPL-2.0	Library
libext4_utils.so	Apache-2.0	Library
libf2fs_sparseblock.so	Apache-2.0	Library
libfdtrack.so	BSD-2-Clause	Library
libfec.so	Apache-2.0	Library
libFFTEm.so	Apache-2.0	Library
libfilterfw.so	Apache-2.0	Library
libfilterpack_imageproc.so	Apache-2.0	Library
libfmq.so	Apache-2.0	Library
libfruit.so	Apache-2.0	Library
libfs_mgr.so	Apache-2.0	Library
libfs_mgr_binder.so	Apache-2.0	Library
libft2.so	BSD-3-Clause	Library
libgatekeeper.so	Apache-2.0	Library
libgatekeeper_aidl.so	Apache-2.0	Library
libgfxstats.so	Apache-2.0	Library
libGLESV1_CM.so	Apache-2.0	Library
libGLESV2.so	Apache-2.0	Library
libGLESV3.so	Apache-2.0	Library
libgpuservice.so	Apache-2.0	Library
libgralloctypes.so	Apache-2.0	Library
libgraphicsenv.so	Apache-2.0	Library
libgsi.so	Apache-2.0	Library
libgui.so	Apache-2.0	Library
libhardware.so	Apache-2.0	Library
libhardware_legacy.so	Apache-2.0	Library
libharfbuzz_ng.so	MIT	Library



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Module Name	License	Description
libheif.so	Apache-2.0	Library
libhidcommand_jni.so	Apache-2.0	Library
libhidlallocatorutils.so	Apache-2.0	Library
libhidlbase.so	Apache-2.0	Library
libhidl-gen-hash.so	Apache-2.0	Library
libhidl-gen-utils.so	Apache-2.0	Library
libhidlmemory.so	Apache-2.0	Library
libhwui.so	Apache-2.0	Library
libidmap2.so	Apache-2.0	Library
libidmap2_policies.so	Apache-2.0	Library
libimage_io.so	Apache-2.0	Library
libimg_utils.so	Apache-2.0	Library
libincfs.so	Apache-2.0	Library
libincident.so	Apache-2.0	Library
libincidentpriv.so	Apache-2.0	Library
libinput.so	Apache-2.0	Library
libinputflinger.so	Apache-2.0	Library
libinputflinger_base.so	Apache-2.0	Library
libinputreader.so	Apache-2.0	Library
libinputreporter.so	Apache-2.0	Library
libinputservice.so	Apache-2.0	Library
libion.so	Apache-2.0	Library
libiprouteutil.so	GPL-2.0	Library
libjni_pacprocessor.so	Apache-2.0	Library
libjnigraphics.so	Apache-2.0	Library
libjpeg.so	BSD-3-Clause	Library
libjsoncpp.so	MIT	Library
libkeymaster_messages.so	Apache-2.0	Library
libkeymaster_portable.so	Apache-2.0	Library
libkeymaster4_1support.so	Apache-2.0	Library
libkeymaster4support.so	Apache-2.0	Library



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Module Name	License	Description
libkeystore_aidl.so	Apache-2.0	Library
libkeystore_binder.so	Apache-2.0	Library
libkeystore_parcelables.so	Apache-2.0	Library
libkeystore-attestation-application-id.so	Apache-2.0	Library
libkeystore-engine.so	Apache-2.0	Library
libkeyutils.so	BSD-2-Clause	Library
liblayers_proto.so	Apache-2.0	Library
libldacBT_abr.so	Apache-2.0	Library
libldacBT_enc.so	Apache-2.0	Library
libLLVM_android.so	BSD-3-Clause	Library
liblog.so	Apache-2.0	Library
liblogwrap.so	Apache-2.0	Library
liblp.so	Apache-2.0	Library
liblpdump.so	Apache-2.0	Library
liblpdump_interface-V1-cpp.so	Apache-2.0	Library
liblz4.so	BSD-2-Clause	Library
liblzma.so	Apache-2.0	Library
libm.so	BSD-3-Clause	Library
libmdnssd.so	Apache-2.0	Library
libmedia.so	Apache-2.0	Library
libmedia_codeclist.so	Apache-2.0	Library
libmedia_helper.so	Apache-2.0	Library
libmedia_jni.so	Apache-2.0	Library
libmedia_jni_utils.so	Apache-2.0	Library
libmedia_omx.so	Apache-2.0	Library
libmedia_omx_client.so	Apache-2.0	Library
libmediadm.so	Apache-2.0	Library
libmediadrmmetrics_consumer.so	Apache-2.0	Library
libmediadrmmetrics_full.so	Apache-2.0	Library
libmediadrmmetrics_lite.so	Apache-2.0	Library
libmediaextractorservice.so	Apache-2.0	Library



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Module Name	License	Description
libmedialogservice.so	Apache-2.0	Library
libmediametrics.so	Apache-2.0	Library
libmediametricsservice.so	Apache-2.0	Library
libmediandk.so	Apache-2.0	Library
libmediandk_utils.so	Apache-2.0	Library
libmediaplayerservice.so	Apache-2.0	Library
libmediautils.so	Apache-2.0	Library
libmeminfo.so	Apache-2.0	Library
libmemtrack.so	Apache-2.0	Library
libmemunreachable.so	Apache-2.0	Library
libminijail.so	BSD-3-Clause	Library
libminikin.so	Apache-2.0	Library
libmkbootimg_abi_check.so	Apache-2.0	Library
libmtp.so	LGPL-2.0	Library
libnativebridge_lazy.so	Apache-2.0	Library
libnativedisplay.so	Apache-2.0	Library
libnativeloader_lazy.so	Apache-2.0	Library
libnativewindow.so	Apache-2.0	Library
libnbaio.so	Apache-2.0	Library
libnblog.so	Apache-2.0	Library
libnetd_client.so	Apache-2.0	Library
libnetdbpf.so	Apache-2.0	Library
libnetdutils.so	Apache-2.0	Library
libnetlink.so	GPL-2.0	Library
libnetutils.so	Apache-2.0	Library
libneuralnetworks_packageinfo.so	Apache-2.0	Library
libnl.so	LGPL-2.1	Library
libOpenMAXAL.so	Apache-2.0	Library
libOpenSLES.so	Apache-2.0	Library
libpackagelistparser.so	Apache-2.0	Library
libpcap.so	BSD-3-Clause	Library





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Module Name	License	Description
libpcre2.so	BSD-3-Clause	Library
libpdfium.so	BSD-3-Clause	Library
libpdx_default_transport.so	Apache-2.0	Library
libperpetto.so	Apache-2.0	Library
libperpetto_android_internal.so	Apache-2.0	Library
libpiex.so	Apache-2.0	Library
libpng.so	BSD-3-Clause	Library
libpower.so	Apache-2.0	Library
libpowermanager.so	Apache-2.0	Library
libprintspooler_jni.so	Apache-2.0	Library
libprocessgroup.so	Apache-2.0	Library
libprocessgroup_setup.so	Apache-2.0	Library
libprocinfo.so	Apache-2.0	Library
libprotobuf-cpp-full.so	Apache-2.0	Library
libprotobuf-cpp-lite.so	Apache-2.0	Library
libprotoutil.so	Apache-2.0	Library
libpsi.so	Apache-2.0	Library
libpuresoftkeymasterdevice.so	Apache-2.0	Library
libqtaguid.so	Apache-2.0	Library
libradio_metadata.so	Apache-2.0	Library
libresourcemanager.service.so	Apache-2.0	Library
libRS.so	Apache-2.0	Library
libRS_internal.so	Apache-2.0	Library
librs_jni.so	Apache-2.0	Library
libRSCacheDir.so	Apache-2.0	Library
libRScpp.so	Apache-2.0	Library
libRSCpuRef.so	Apache-2.0	Library
libRSDriver.so	Apache-2.0	Library
librtsp_jni.so	Apache-2.0	Library
libschedulerservicehidl.so	Apache-2.0	Library
libselinux.so	GPL-2.0	Library



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Module Name	License	Description
libsensor.so	Apache-2.0	Library
libsensorprivacy.so	Apache-2.0	Library
libsensorservice.so	Apache-2.0	Library
libsensorservicehidl.so	LGPL-2.1	Library
libservices.so	Apache-2.0	Library
libsfplugin_ccodec.so	Apache-2.0	Library
libsfplugin_ccodec_utils.so	Apache-2.0	Library
libsigchain.so	Apache-2.0	Library
libsoft_attestation_cert.so	Apache-2.0	Library
libsoftkeymasterdevice.so	Apache-2.0	Library
libsonic.so	Apache-2.0	Library
libsonivox.so	Apache-2.0	Library
libsoundpool.so	Apache-2.0	Library
libsparse.so	Apache-2.0	Library
libspeexresampler.so	BSD-3-Clause	Library
libsqlite.so	Apache-2.0	Library
libsquashfs_utils.so	Apache-2.0	Library
libssl.so	BSD-3-Clause	Library
libstagefright.so	Apache-2.0	Library
libstagefright_amrnb_common.so	Apache-2.0	Library
libstagefright_bufferpool@2.0.1.so	Apache-2.0	Library
libstagefright_bufferqueue_helper.so	Apache-2.0	Library
libstagefright_codecbase.so	Apache-2.0	Library
libstagefright_foundation.so	Apache-2.0	Library
libstagefright_framecapture_utils.so	Apache-2.0	Library
libstagefright_http_support.so	Apache-2.0	Library
libstagefright_httplive.so	Apache-2.0	Library
libstagefright_omx.so	Apache-2.0	Library
libstagefright_omx_utils.so	Apache-2.0	Library
libstagefright_xmlparser.so	Apache-2.0	Library
libstatshidl.so	Apache-2.0	Library



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Module Name	License	Description
libstatslog.so	Apache-2.0	Library
libstc++.so	BSD-3-Clause	Library
libsurfaceflinger.so	Apache-2.0	Library
libSurfaceFlingerProp.so	Apache-2.0	Library
libsync.so	Apache-2.0	Library
libsysutils.so	Apache-2.0	Library
libtimeinstat.so	Apache-2.0	Library
libtimestats.so	Apache-2.0	Library
libtimestats_proto.so	Apache-2.0	Library
libtinyalsa.so	BSD-3-Clause	Library
libtinyxml2.so	BSD-3-Clause	Library
libtombstoned_client.so	Apache-2.0	Library
libui.so	Apache-2.0	Library
libunwindstack.so	Apache-2.0	Library
libusbhost.so	Apache-2.0	Library
libutils.so	Apache-2.0	Library
libutilscallstack.so	Apache-2.0	Library
libvibrator.so	Apache-2.0	Library
libvintf.so	Apache-2.0	Library
libvkjson.so	Apache-2.0	Library
libvndksupport.so	Apache-2.0	Library
libvulkan.so	Apache-2.0	Library
libwebviewchromium_loader.so	Apache-2.0	Library
libwebviewchromium_plat_support.so	Apache-2.0	Library
libwfds.so	Apache-2.0	Library
libwifi-system-iface.so	Apache-2.0	Library
libwilhelm.so	Apache-2.0	Library
libxml2.so	MIT	Library
libyuv.so	BSD-3-Clause	Library
libz.so	Zlib	Library
libziparchive.so	Apache-2.0	Library



## License

Module Name	License	Description
netd_aidl_interface-V4-cpp.so	Apache-2.0	Library
netd_event_listener_interface-V1-cpp.so	Apache-2.0	Library
oemnetd_aidl_interface-V1-cpp.so	Apache-2.0	Library
pppol2tp-android.so	BSD-3-Clause	Library
pppopptp-android.so	BSD-3-Clause	Library
server_configurable_flags.so	Apache-2.0	Library
service.incremental.so	Apache-2.0	Library
slicer.so	Apache-2.0	Library
suspend_control_aidl_interface-V1-cpp.so	Apache-2.0	Library
android.hidl.memory@1.0-impl.so	Apache-2.0	Library

### 2.7.3 System\_ext logical partition

All modules follows the official AOSP licence rule<sup>[3]</sup>

Module Name	License	Description
CellBroadcastAppPlatform	Apache-2.0	Private Application
Provision	Apache-2.0	Private Application
Settings	Apache-2.0	Private Application
StorageManager	Apache-2.0	Private Application
SystemUI	Apache-2.0	Private Application
WallpaperCropper	Apache-2.0	Private Application
stagefright	Apache-2.0	Binary

### 2.7.4 Product logical partition

All modules follows the official AOSP licence rule<sup>[4]</sup>

Module Name	License	Description
LatinIME	Apache-2.0	Application



License		
Module Name	License	Description
ModuleMetadata	Apache-2.0	Application
QuickSearchBox	Apache-2.0	Application
STAudio	Apache-2.0	STMicroelectronics Application
STCamera	Apache-2.0	STMicroelectronics Application
STCoproM4Echo	Apache-2.0	STMicroelectronics Application
STCoproM4Example	Apache-2.0	STMicroelectronics Application
STGraphics	Apache-2.0	STMicroelectronics Application
STLauncher	Apache-2.0	STMicroelectronics Application
STVideo	Apache-2.0	STMicroelectronics Application
webview	Apache-2.0	Application
AccentColorBlack	Apache-2.0	Overlay package
AccentColorCinnamon	Apache-2.0	Overlay package
AccentColorGreen	Apache-2.0	Overlay package
AccentColorOcean	Apache-2.0	Overlay package
AccentColorOrchid	Apache-2.0	Overlay package
AccentColorPurple	Apache-2.0	Overlay package
AccentColorSpace	Apache-2.0	Overlay package
	Apache-	



License		
Module Name	License	Description
DisplayCutoutEmulationCorner	2.0	Overlay package
DisplayCutoutEmulationDouble	Apache-2.0	Overlay package
DisplayCutoutEmulationHole	Apache-2.0	Overlay package
DisplayCutoutEmulationTall	Apache-2.0	Overlay package
DisplayCutoutEmulationWaterfall	Apache-2.0	Overlay package
FontNotoSerifSource	Apache-2.0	Overlay package
IconPackCircularAndroid	Apache-2.0	Overlay package
IconPackCircularLauncher	Apache-2.0	Overlay package
IconPackCircularSettings	Apache-2.0	Overlay package
IconPackCircularSystemUI	Apache-2.0	Overlay package
IconPackCircularThemePicker	Apache-2.0	Overlay package
IconPackFilledAndroid	Apache-2.0	Overlay package
IconPackFilledLauncher	Apache-2.0	Overlay package
IconPackFilledSettings	Apache-2.0	Overlay package
IconPackFilledSystemUI	Apache-2.0	Overlay package
IconPackFilledThemePicker	Apache-2.0	Overlay package
IconPackRoundedAndroid	Apache-2.0	Overlay package
IconPackRoundedLauncher	Apache-2.0	Overlay package



License		
Module Name	License	Description
IconPackRoundedSettings	Apache-2.0	Overlay package
IconPackRoundedSystemUI	Apache-2.0	Overlay package
IconPackRoundedThemePicker	Apache-2.0	Overlay package
IconShapePebble	Apache-2.0	Overlay package
IconShapeRoundedRect	Apache-2.0	Overlay package
IconShapeSquircle	Apache-2.0	Overlay package
IconShapeTaperedRect	Apache-2.0	Overlay package
IconShapeTeardrop	Apache-2.0	Overlay package
IconShapeVessel	Apache-2.0	Overlay package
NavigationBarMode3Button	Apache-2.0	Overlay package
NavigationBarModeGestural	Apache-2.0	Overlay package
NavigationBarModeGesturalExtraWideBack	Apache-2.0	Overlay package
NavigationBarModeGesturalNarrowBack	Apache-2.0	Overlay package
NavigationBarModeGesturalWideBack	Apache-2.0	Overlay package
SettingsIntelligence	Apache-2.0	Private Application
libjni_latinime	Apache-2.0	Library

**License****2.8 Misc partition**

<b>Name</b>	<b>Version</b>	<b>License</b>
bootloader message	1	Apache-2.0





**License**

**3 Licenses**

Official licenses	Link to text of license
Apache-2.0	[ <a href="#">Apache-2.0</a> ]
0BSD	[ <a href="#">Zero-Clause BSD</a> ]
BSD-2-Clause	[ <a href="#">BSD-2-Clause</a> ]
BSD-3-Clause	[ <a href="#">BSD-3-Clause</a> ]
GPL-2.0	[ <a href="#">GPL-2.0</a> ]
GPL-2.0-with-classpath-exception	[ <a href="#">GPL-2.0-with-classpath-exception</a> ]
LGPL-2.0	[ <a href="#">LGPL-2.0</a> ]
LGPL-2.1	[ <a href="#">LGPL-2.1</a> ]
MirOS	[ <a href="#">MirOS</a> ]
MIT	[ <a href="#">MIT</a> ]
NCSA	[ <a href="#">NCSA</a> ]
Proprietary (gcnano-userland)	<a href="#">gcnano-userland-license</a>
Proprietary (firmware-atheros)	<a href="#">firmware-atheros-license</a>
Proprietary (firmware-broadcom)	<a href="#">firmware-broadcom-bcm43xx-license</a>
Proprietary (firmware-cypress)	<a href="#">firmware-cypress-bcm4343-license</a>
Zlib	[ <a href="#">Zlib</a> ]

License name	Authorized variations names			
Apache-2.0	<table border="1"> <tr><td>Apachev 2</td></tr> <tr><td>Apache- 2</td></tr> </table>	Apachev 2	Apache- 2	
Apachev 2				
Apache- 2				
GPL-2.0	<table border="1"> <tr><td>GPL-2</td></tr> <tr><td>GPLv2</td></tr> <tr><td>GPLv2. 0</td></tr> </table>	GPL-2	GPLv2	GPLv2. 0
GPL-2				
GPLv2				
GPLv2. 0				



**License**

License name	Authorized variations names
<p>LGPL-2.0</p>	<p>LGPLv2</p> <p>LGPLv2.0</p>
<p>MIT</p>	<p>MIT-X</p> <p>MIT-style</p>

All Text of License are available:  
<https://opensource.org/licenses> and <https://spdx.org/licenses>

*Android is a trademark of Google LLC*

**4 Archives**

STM32MP15 release	STM32MPU distribution for Android licenses
<p>STM32MP15-Ecosystem-v1.2.0</p>	<p>LegalInformation:STM32MPU distribution for Android licenses - v1.1.0 page for the v1 ecosystem releases (in archived wiki)</p>
<p>STM32MP15-Ecosystem-v1.1.0</p>	<p>LegalInformation:STM32MPU distribution for Android licenses - v1.0.0 page for the v1 ecosystem releases (in archived wiki)</p>

- <https://source.android.com/setup/start/licenses>
- <https://source.android.com/setup/start/licenses>
- <https://source.android.com/setup/start/licenses>
- <https://source.android.com/setup/start/licenses>

Linux® is a registered trademark of Linus Torvalds.

First Stage Boot Loader

Second Stage Boot Loader

Trusted Execution Environment

Non Applicable

Device Tree Binary (or Blob)



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Android Open Source Project

technology for wireless local area networking with devices based on the IEEE 802.11 standards

BlueTooth

Open Portable Trusted Execution Environment

Hardware Abstraction Layer